

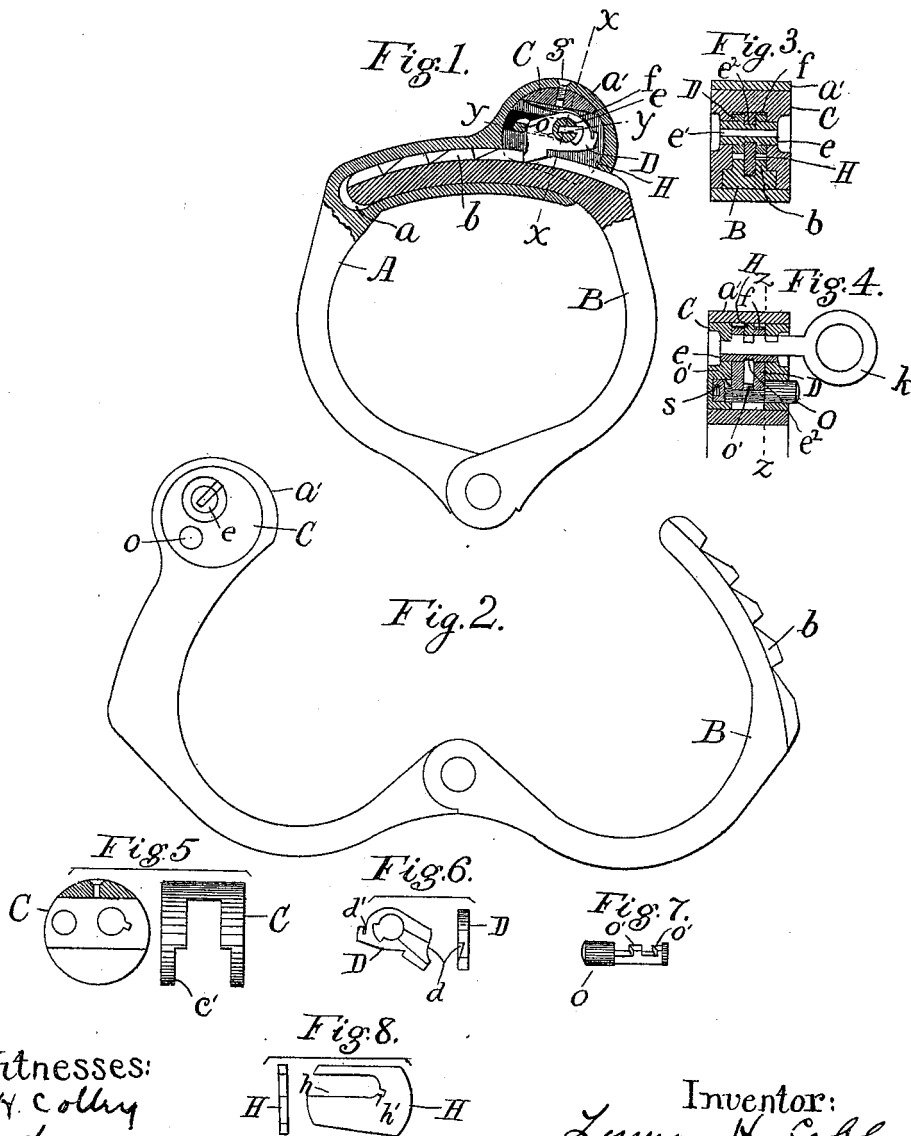
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L. H. COBB,
HANDCUFF.

(Application filed Jan. 23, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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HANDCUFF.

SPECIFICATION forming part of Letters Patent No. 623,984, dated May 2, 1899.

Application filed January 23, 1899. Serial No. 703,086. (No model.)

To all whom it may concern:

Be it known that I, LYMAN H. COBB, a citizen of the United States of America, and a resident of South Portland, Cumberland county, State of Maine, have invented certain new and useful Improvements in Handcuffs, of which the following is a specification.

My invention relates to handcuffs of that class which are composed of two members hinged or pivoted together, one member having a socket and the other a ratchet fitting said socket. In these ratchet-handcuffs the ratchet is held in the socket by a spring-pawl controlled or unlocked by a key. As these handcuffs have hitherto been made the locking mechanism in order to prevent its being tampered with has been inclosed in the socket and held there by a riveted plate, which it was necessary to remove in order to reach and repair the interior of the lock. Thus if the lock gets out of order it is necessary to tear the handcuff to pieces before it can be repaired.

One of the chief objects of my present invention is to so insert the lock mechanism that it can be freely and easily removed when the handcuff is open, but so that it will be secured firmly in place when the handcuff is closed. This I do by mounting the locking mechanism in a suitably-recessed block, which is inserted freely in an opening in the socket member when the handcuff is open and which is held in said recess when the handcuff is closed by the passage of the ratchet through the recess formed in said block.

Another feature of the invention is the use of the lock-spindle as a journal for pivoting the pawls and in extending the lock-spindle entirely through the handcuff, so that it may be unlocked from either side.

Other features of my invention will be set forth in the following specification and claims.

I illustrate my invention by means of the accompanying drawings, in which—

Figure 1 is a section on the line Z Z of Fig. 4. Fig. 2 is a side view of the handcuff shown in an open position. Fig. 3 is a section on the line X X of Fig. 1. Fig. 4 is a section on the line Y Y of Fig. 1. Fig. 5 is a detail of the block. Fig. 6 is a detail of the tumbler-pawl. Fig. 7 is a detail of the catch, and Fig. 8 is a detail of the binding-key.

A represents the socket member, and B is the ratchet member of the handcuff, these parts being joined by a hinge in the usual manner. The socket member contains an elongated socket *a*, which receives the ratchet *b*.

The locking mechanism, which is the subject of the present invention, is located at the end of the socket member, which is enlarged for the purpose of receiving it.

The locking mechanism is contained in a block C, here shown as cylindrical in its general shape, with a recess *c'* extending through it at right angles to the axis of the cylinder and leaving a small solid portion at the top to hold the two sides formed by the recess together. The lower portion of the recess through which the ratchet passes is somewhat wider than the upper portion which holds the locking mechanism. The block is inserted in an opening in the socket member. I here show this opening extending laterally through the enlarged end of the socket member, and it is of the same size as the block, so that when the latter is in place it fills the opening from one face to the other, giving the end of the handcuff a smooth finish. When the block is in position, it is held in two ways—first, by a screw *g*, passing through the solid portion, and, second and chiefly, by the passage of the ratchet *b* through the enlarged lower portion of the recess *c'* when the handcuff is closed. Thus taking out of account the screw *g*, which can be easily removed at any time, the block can be slipped freely out of and into the opening when the handcuff is open, and the ratchet is drawn out of the socket, while it cannot be removed when the ratchet is in the socket.

The locking mechanism is located in the upper portion of the recess *c'*, and it consists, as here shown, of two pawls D, which also act as tumblers of the lock, a lock-spindle *e*, longitudinally slotted at *e'* to receive the key and on which the "tumbler-pawls," as I shall call them, are journaled, a sliding catch O for holding the tumbler-pawls in an unlocked position away from the ratchet, and the bifurcated key H, which holds all the parts together.

The lock-spindle *e* extends entirely through the block from one side to the other, and the key *k* can be inserted at either side of the

handcuff. The tumbler-pawls D are pivoted on the lock-spindle *e*, and they are pressed down onto the ratchet by springs *f*, the ends of which fit in recesses *d'* in the tumbler-pawls.

5 The sliding catch O for holding the tumbler-pawls unlocked is retained in openings in the block and it extends across the block adjacent to the outer ends of the tumbler-pawls, Figs. 1 and 4. The catch has two projections
10 *o'*, which overlap the outer ends of the tumbler-pawls and are pressed laterally against them by the coiled spring *s*, contained in a recess in the end of the catch. Notches *d* are formed in the sides of the tumbler-pawls adjacent to the edge and in position where the
15 projections *o'* will snap into them as the tumbler-pawls are lifted.

The outer end of the catch O projects slightly beyond the face of the block, so that
20 it may be manipulated by the thumb.

The various parts are held in place in the block by means of the binding-key H, which is a plate inserted between the tumbler-pawls and bifurcated by a slot *h*, the rear end of
25 which fits into an annular slot *e* in the lock-spindle, thus preventing the latter from slipping out endwise. A recess *h'* is formed at the inner end of the slot *h* for the passage of the key. The lower forward limb of the binding-key is in close contact with the flat face
30 of the catch O, so that the latter is prevented from turning in its bearings, and finally the rear end of the key is flush with the surface of the block, so that it is held in place by the
35 walls of the openings in which the block is retained. By pulling out the key all the parts may be removed from the block.

The operation of my handcuff will be easily understood, as it is similar to others of the
40 same class. The tumbler-pawls are lifted and the ratchet released by turning the key, as in locks of similar construction, and as the tumbler-pawls are lifted they are held in a raised position by the catch O, the projections of which snap into the notches *d*.
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To lock the handcuff after the ratchet is pushed into the socket, it is only necessary to press the outer end of the catch O, and the projections *o'* are disengaged from the notches
50 *d*, and the tumbler-pawls are forced by their springs down onto the ratchet.

I claim—

1. The herein-described ratchet-handcuff having a ratchet member and a socket member,
55 the latter being provided with an opening, a recessed block bearing the locking mechanism and adapted to be freely inserted into and removed from said opening when the handcuff is open, and held against removal

by the passage of the ratchet through the recess when the handcuff is closed. 60

2. The herein-described handcuff having a ratchet member and a socket member, the latter being provided with a lateral opening, a recessed block bearing the locking mechanism and adapted to be freely inserted into and removed from said opening when the handcuff is open and held against removal therefrom by the passage of the ratchet through the recess when the handcuff is closed. 70

3. The herein-described ratchet-handcuff having a ratchet member and a socket member, the latter being provided with a lateral opening extending through it from one side to the other, a recessed block bearing the locking mechanism and adapted to be freely inserted into and removed from said opening when the handcuff is open and held against removal therefrom by the passage of the ratchet through the recess when the handcuff
80 is closed.

4. The herein-described ratchet-handcuff having a ratchet member and a socket member, a lock-spindle extending through said socket member and having a key-slot therein,
85 a tumbler-pawl journaled on said spindle and adapted to engage said ratchet and to be operated by the key and a spring for said tumbler-pawl.

5. The herein-described ratchet-handcuff
90 having a ratchet member and a socket member, a lock-spindle extending through said socket member and having a key-slot therein, a tumbler-pawl journaled on said spindle and adapted to engage said ratchet and to be operated by the key from either face of the handcuff, and a spring for said tumbler-pawl. 95

6. The herein-described ratchet-handcuff having a ratchet member and a socket member a lateral opening through said socket
100 member, a block fitting therein, an annularly-grooved lock-spindle extending through said block and having a key-slot therein, a pair of tumbler-pawls journaled to said lock-spindle and adapted to engage the ratchet, a catch
105 for holding said tumbler-pawls out of engagement with said ratchet and a bifurcated binding-key inserted from the front between said tumbler-pawls and straddling said lock-spindle, the rear end of the bifurcation of said
110 key fitting the annular groove of said lock-spindle and the rear edge of said key being flush with the surface of said block, whereby the parts are held in place by said key.

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